



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3622-15
Job Sheet 165378



Part No: D3622-15

Job Qty: 10 ea

Part Name: Ball Stud



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 10/2/17

Job Tracking No:

Due Date: 10/31/17

Created By: Linda Lacelle

Type: Stock

Description:

Note: DWG REV D IPP REV:A 16.04.20 NEW ISSUE DD VERF:JLM

Ship Via:

Bill of Materials

Part/Part Name	Part Note	Serial No	Quantity	Location
D3622-15	DWG REV D IPP REV:A 16.04.20 NEW ISSUE DD VERF:JLM		0.000	
Ball Stud				
M303H0.500			0.000	
303 Hex Bar .500				

Job Routing

Op No	Operation	Qty	Due Date	Standard		Workcenter/Supplier	
				Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time
90	Start up Operation	10 Ea	10/31/17	0.00	0.00	Start up container	20
100	Hardinge	10 pcs	10/31/17	0.00	3.13	Hardinge	20
110	QC	10 pcs	10/31/17	0.00	0.00	QC2	20
120	QC	10 pcs	10/31/17	0.00	0.00	QC8	Scrap 10
130	Packaging	10 pcs	10/31/17	0.00	0.00	Packaging3	5043
140	QC21-SA	10 Ea	10/31/17	0.00	0.00	QC21	

Part Op
Descriptions: 100 - 1-TURN AS PER FOLIO F _____ & DWG D3622 ,

DAS
21 NOV 06 2017
9-89

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	M303H0.500	1	0	0	0

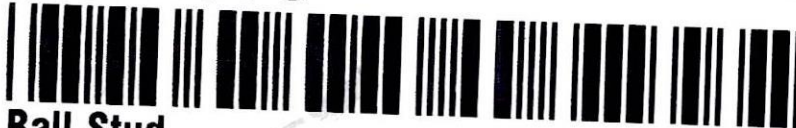
Part Specifications

Specifications could not be found.

Plex 10/2/17 2:25 PM Dart.lajeunesse.marie

DART
AEROSPACE
S003678

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com



Ball Stud

PART NO: D3622 - 15

Revision:

Operation: Start up Operation

Quantity: 20

Change No:

Mfg Date: 10/30/17

Job No: 165378

Quality Control

QA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: <u>165378</u> Part No. <u>D3622-15</u> NCR No. _____		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☒ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date: <u>17/10/30</u>		Step #: <u>100</u>		QTY Effective: <u>10</u>			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				PD 17-10-31 Completed By Lead hand / Supervisor Approval Verification <u>G.A 17-10-31</u> QC / QA Coordinator Approval <u>PD 17-10-31</u>	
the thread major diameter was machined under too small so it's under the tolerance. due to an undersized pitch ϕ .				Scrap + destroy and <u>replace</u>					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☒	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☒				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☒				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER: _____							

Monday, August 21, 2017 2:47:03 PM

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Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Picklist Print

Monday, August 21, 2017 2:47:06 PM

Page 1

Work Order ID: 165378

165378

Parent Item: D3622-15

D3622-15

Parent Item Name: Ball Stud

Start Date: 8/16/2017

Required Date: 8/25/2017

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 16.04.20 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303H0.500		Purchased	No			100	f	4.9580	0.123	1.294737			

M303H0 500

303 HEX BAR .500

Location

Loc Qty

Loc Code

MAT018

4.958

m136036

4.958

23.875 Po / 1.980 Pi

DAS
23
9-89

17/10/23

DQA: _____ Date: _____



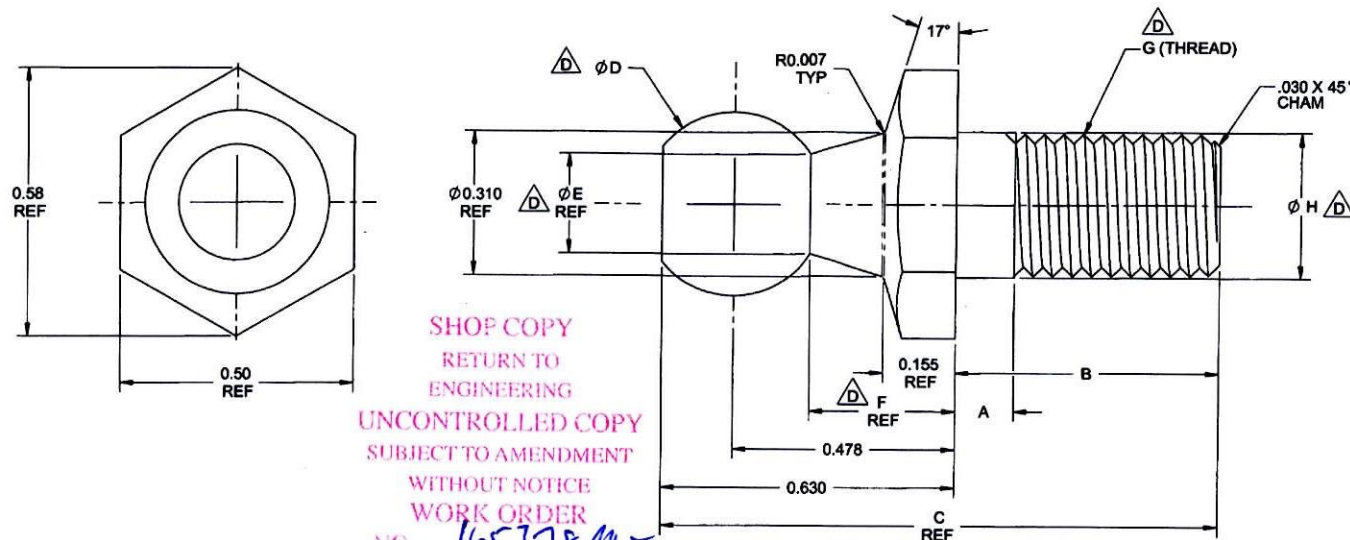
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

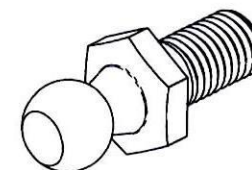
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

8 7 6 5 4 3 2 1



SHOP COPY
RETURN TO
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 165378 M5 17-08-22



**D3622-1 BALL STUD
SHOWN**



**D3622-11 BALL STUD
SHOWN**

PART NUMBER	DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	WEIGHT (LBS)	THREAD G	MIN Ø H	MAX
D3622-1	0.125	0.563	1.19	0.394	0.215	0.313	0.03	0.3125-24UNF-3A	0.3053	0.3125
D3622-3	0.125	0.563	1.19	0.394	0.215	0.313	0.03	0.1875-32UNF-3A	0.1840	0.1900
D3622-5	0.090	0.900	1.53	0.394	0.215	0.313	0.04	0.3125-24UNF-3A	0.3053	0.3125
D3622-7	0.060	0.330	0.96	0.394	0.215	0.313	0.03	0.3125-24UNF-3A	0.3053	0.3125
D3622-9	0.090	1.160	1.79	0.394	0.215	0.313	0.04	0.3125-24UNF-3A	0.3053	0.3125
D3622-11	0.060	N/A	0.69	0.394	0.215	0.313	0.02	NOT THREADED	0.270	0.300
D3622-13	0.090	0.680	1.31	0.394	0.215	0.313	0.03	0.3125-24UNF-3A	0.3053	0.3125
D3622-15	0.090	0.430	1.06	0.350	0.202	0.334	0.02	M6 X 1.0	5.62mm	6.00mm

D3622-X BALL STUD

0.229-0.236

NOTES:

- 1) MATERIAL: AISI 303 HEX BAR
REF DART SPEC M303H0.500
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENT P/N D3622-X & B/N PER QSI 044
- 7) WEIGHT: SEE D3622-X TABLE

RELEASED
2016-04-18
ECN 16-557

APPROVED

DESIGN	JPH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AK	DRAWING NO.	REV. D
CHECKED	VS	D3622	SHEET 1 OF 1
MFG. APPR.	JL	TITLE	SCALE
APPROVED	HS	BALL STUD	NTS
DE APPR.	DS	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	16.03.15		